Ontario

Ministry of Natural Resources

Hon. Alan W. Pope
Minister

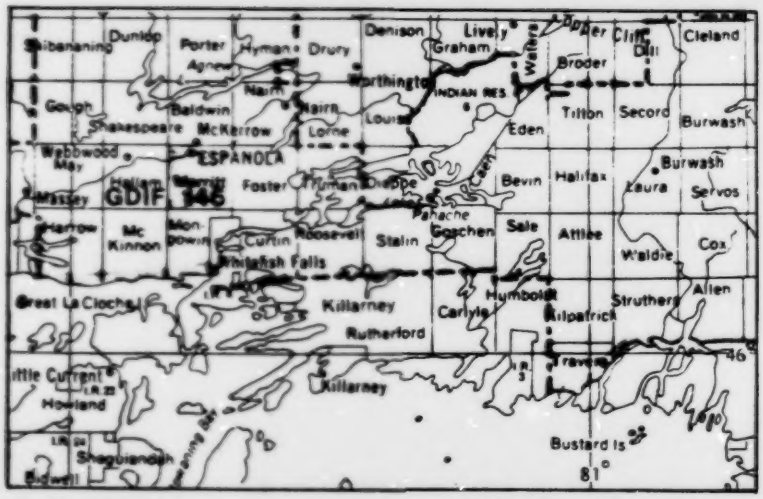
John R. Sloan
Deputy Minister

ONTARIO GEOLOGICAL SURVEY
GEOLOGICAL DATA INVENTORY FOLIO
GDIF 146

MERRIT TOWNSHIP

DISTRICT OF SUDBURY

Compiled by the Staff of
the Resident Geologist's Office,
Sudbury



LOCATION MAP

Scale 1:1 013 760 or 1 inch to 16 miles

85-1184/

NTS Number 41 I/4, 41 I/5

Mining Claim Map Number M863

This project was funded by the Ontario Ministry of Northern Affairs through the Northern Ontario Geological Survey (NOGS) Program.

STATEMENT: This inventory is unedited. Discrepancies may occur for which the Ontario Geological Survey does not assume liability. Information from this source may be quoted if credit is given. Reference to this inventory should be made as follows:

Ontario Geological Survey
1984: Merritt Township, Sudbury District; Ontario Geological Survey, Geological Data Inventory Folio 146, compiled by the staff of the Resident Geologist's office, Sudbury, 16p. and 2 maps.

Original Compilation by: Adlington, Richard, Nov.16, 1983

Date	Page Revised	Revised by

Date	Page Revised	Revised by

MERRITT TOWNSHIP

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ACCOMPANYING MAPS

Property Location Map – 1 map

Exploration Data Map – 1 map

Map Scale 1: 31 680 or 1 inch to ½ mile

MERRITT TOWNSHIP

CONVERSION FACTORS FOR MEASUREMENTS IN ONTARIO GEOLOGICAL SURVEY PUBLICATIONS

If the reader wishes to convert imperial units to SI (metric) units or SI units to imperial units the following multipliers should be used:

CONVERSION FROM SI TO IMPERIAL			CONVERSION FROM IMPERIAL TO SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
			LENGTH		
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709 7	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
			AREA		
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
			VOLUME		
1 cm^3	0.061 02	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.308 0	cubic yards	1 cubic yard	0.764 555	m^3
			CAPACITY		
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
			MASS		
1 g	0.035 273 96	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 75	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 62	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	1.016 046 908 8	t
			CONCENTRATION		
1 g/t	0.029 166 6	ounce (troy)/ton (short)	1 ounce (troy)/ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ton (short)	1 pennyweight/ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

1 ounce (troy)/ton (short)	20.0	pennyweights/ton (short)
1 pennyweight/ton (short)	0.05	ounce (troy)/ton (short)

One gram(g) per tonne is equivalent to one part per million (1 ppm).

NOTE–Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries published by The Mining Association of Canada in co-operation with the Coal Association of Canada.

DATA SOURCES CHECK LIST

NOTE: The following sources have been searched to compile the data for this area. If no reference data was found the appropriate box is marked 'no'; if reference data was found, the box is marked 'yes'.

All reference data found are included in the following pages. If the box is blank, the data source has not yet been searched. If the box is marked N.A., the source item is Not Applicable to this area and therefore not searched.

	SOURCES OF DATA	Data	Initial
1	Resident Geologist's Office Files	Yes	R.A.
2	Assessment Files Research Office, Toronto	N.A.	R.A.
3	ODM General Index; 7 volumes	Yes	R.A.
4	Catalogue of Airborne Geophysical Surveys (ODM)	No	R.A.
5	ODM Mineral Resources Circulars and OGS Mineral Deposits Circulars	Yes	R.A.
6	ODM Industrial Mineral Reports	No	R.A.
7	Bibliography of Post Precambrian Theses - Karrow (ODM MP 1)	No	R.A.
8	Bibliography of Precambrian Theses - Ginn (ODM MP 2)	Yes	R.A.
9	Newspaper Clippings File	Yes	R.A.
10	GSC Index to Publications	Yes	R.A.
11	OGS Index to Published Maps and Reports - MP 77 and Supplements to MP 77	Yes	R.A.
12	OGS Index Maps	Yes	R.A.
13	Source Mineral Deposit Records (O.G.S.) Mineral Occurrences File	Yes	R.A.
14	Author - Subject Articles File	Yes	R.A.
15	Miscellaneous Papers: ODM & OGS	Yes	R.A.
16	ODM Geological Circulars: OGS Study Series , Reports	Yes	R.A.
17	ODM Preliminary Reports: ODM Bulletins	No	R.A.
18	ODM – OGS Open File Reports	Yes	R.A.
19	OGS Northern Ontario Engineering Geology Terrain Studies	Yes	R.A.
20	OGS Aggregate Resources Inventory Papers	No	R.A.
21	OGS Mineral Potential Maps	Yes	R.A.
22	Theses on File, Sudbury	Yes	R.A.
23	Aerial Photographs on File, Sudbury	Yes	R.A.

METALS AND MINERALS REFERENCES LIST

△ anh. . . . . .Anhydrite	△ fu. . . . . .Fuchsite	△ Ni. . . . . Nickel	△ st . . . . . .Stone
△ ank. . . . . .Ankerite	△ gn. . . . . Galena	△ Nb . . . . . .Niobium	△ talc. . . . . .Talc
△ anna . . . . . Annabergite	△ gt. . . . . Garnet	△ Pd . . . . . .Palladium	△ Te . . . . . .Tellurium
△ ap. . . . . .Apatite	△ goe. . . . . .Goethite	△ peat . . . . . .Peat	△ td. . . . . Tetrahedrite
△ arg . . . . . Argentite	▲ Au . . . . . Gold	▲ pent . . . . . .Pentlandite	△ th. . . . . .Thorite
△ As . . . . . .Arsenic	△ gf. . . . . .Graphite	△ Pt. . . . . .Platinum	△ Th . . . . . .Thorium
▲ asp . . . . . .Arsenopyrite	△ gl . . . . . Gravel	▲ py . . . . . .Pyrite	△ thuc . . . . . Thucholite
△ asb . . . . . .Asbestos	△ gyp. . . . . Gypsum	△ pyl . . . . . Pyrochlore	△ ti . . . . . Titanite
△ ba. . . . . .Barite	△ hem . . . . . Hematite	△ pyrl . . . . . .Pyrolusite	△ Ti. . . . . Titanium
△ be. . . . . .Beryl	△ il . . . . . Ilmenite	▲ po . . . . . .Pyrrhotite	△ tour . . . . . .Tourmaline
△ Bi. . . . . .Bismuth	△ Fe . . . . . .Iron	▲ q . . . . . .Quartz	△ trap . . . . . .Trap rock
△ bn . . . . . .Bornite	△ IF. . . . . Iron Formation	△ qcv. . . . .Quartz carbonate vein	△ W. . . . . Tungsten
△ brnn . . . . . .Brannerite	△ jas . . . . . Jasper	△ ra. . . . . .Radioactive minerals	△ uran . . . . . .Uraninite
△ bruc . . . . . .Brucite	△ kaol . . . . . .Kaolinite (kaolin)	△ RE . . . . . .Rare Earths	△ U . . . . . .Uranium
△ Cd . . . . . Cadmium	△ ky . . . . . Kyanite	△ sd. . . . . Sand	△ verm . . . . . .Vermiculite
△ calc. . . . . Calcite	△ Pb . . . . . Lead	△ sgl . . . . . Sand and gravel	△ Y . . . . . Yttrium
△ carb . . . . . .Carbonate	△ lim . . . . . Limonite	△ ss . . . . . .Sandstone	△ Zn . . . . . .Zinc
△ cel . . . . . .Celestite	△ Li. . . . . Lithium	△ scap . . . . . Scapolite	△ zr. . . . . Zircon
△ cc. . . . . .Chalcocite	△ mgst . . . . . Magnesite	△ shee . . . . . .Scheelite	▲ s Sulphide
▲ cp. . . . . Chalcopyrite	△ mag . . . . . Magnetite	△ serp . . . . . Serpentine	
△ ch. . . . . .Chert	△ mc . . . . . Malachite	△ sh. . . . . .Shale	
▲ clay . . . . . .Clay	△ Mn . . . . . Manganese	△ sid . . . . . Siderite	
△ Co . . . . . Cobalt	△ mb . . . . . Marble	△ si . . . . . Silica	
△ cob. . . . . Cobaltite	▲ mar. . . . . Marcasite	△ Ag . . . . . .Silver	
△ cb. . . . . .Columbite	△ ma . . . . . .Marl	△ sl . . . . . Slate	
△ Cu . . . . . .Copper	△ mi . . . . . Mica	△ sm . . . . . .Smaltite	
△ cor . . . . . Corundum	△ ml . . . . . Millerite	△ sod. . . . . Sodalite	
△ dol . . . . . Dolomite	△ mo . . . . . Molybdenite	△ spec . . . . . Specularite	
△ ep. . . . . Epidote	△ Mo . . . . . .Molybdenum	△ sp. . . . . .Sphalerite	
△ ery . . . . . Erythrite	△ mon . . . . . Monazite	△ spd . . . . . .Spodumene	
△ fel . . . . . .Feldspar	△ ne. . . . . Nephelite (nepheline)	△ staur . . . . . .Staurolite	
△ fl . . . . . .Fluorite (fluorspar)	△ nc. . . . . .Niccolite	△ stib. . . . . Stibnite	

Solid triangles indicate metal and mineral occurrences shown on the accompanying maps.

MINERAL OCCURRENCES

Map Ref. Letter	Name(s)	Mineralization	Source Mineral Deposit Record	References in OGS Mineral Deposits Circulars & OGS Industrial Mineral Reports	Additional References and/or Remarks
A	Apsey Lake Occurrence	po,py,cp	-	MRC12, p.280	OFR5017, p.12 O.D.M. Map P.322
B	Stratton Lake Au Property	Au	-	MDC18, p.101	Canadian Nickel Co. Map Merritt File 12-A1
C	Canadian Nickel	py,po,asp,cp	-	MRC12, p.280	Merritt File 12-A1 O.D.M. Map P.322
D	Espanola Occurrence	clay	clay 1	-	O.D.M. Map P.322
E	Lot 11, Con.5 Occurrence	qtz	-	-	O.D.M. Map P.322
F	Lot 11, Con.6 Occurrence	qtz	-	-	O.D.M. Map P.322
G	Roche, P. F.	po,cp,pent,	-	-	Merritt File 10-E1
H	Lot 5, Con.1 Occurrence	qtz	-	-	O.D.M. Map P.322
I	Lot 4, Con.3 Occurrence	sulp	-	MRC12, p.280	O.D.M. Map P.322

GDIF FORM NO.

MERRITT TOWNSHIP 4

TYPE OF WORK		Numbers below represent the year in which the work was done; e.g., 68 for 1968																		
EXPLORATION DATA filed at the RESIDENT GEOLOGIST'S OFFICE SUDBURY	COMPANY/AUTHOR (file number)	GEOLOGICAL	GEOCHEMICAL	TRENCHING, STRIPPING	DRILLING	ASSAY DATA	UNDERGROUND WORK	PROSPECTUS, NOTES, CORRESPONDENCE	AIRBORNE MAGNETOMETER	AIRBORNE ELECTROMAGNETIC	AIRBORNE RADIOMETRIC	GROUND MAGNETOMETER	GROUND ELECTROMAGNETIC	GROUND RADIOMETRIC	INDUCED POLARIZATION	SELF POTENTIAL	RESISTIVITY	NEWSPAPER CLIPPINGS		
1	Canadian Nickel Co. Ltd.	81	81									81 82								
2	Hunta, W.			71																
3	Kilembe Copper Cobalt Ltd.																	76		
4	Lacelle, W.			67	67															
5	Mongowin-Sudbury Explorations Ltd.(Hibiscus Developments Ltd.)											75	75							
6	Roche, P. F.	56		56	56															
7	Sutherland, W. D.				61															
8	White, J.				55															

DRILLHOLE SUMMARY

Map Drilling Location Number	Company Name	Company Drillhole Number	Date Drilled	Bearing Azimuth Degrees	Initial Dip of Hole Degrees	Thickness of Overburden Feet	Total Length of Hole Feet	Mineralization Noted in Log	Assay Data Included for
1	Lacelle, W.	3	1967	-	90	-	20	?	-
1a		4	1967	N?	55	-	8.3	?	-
1b		22XC	1967	S	45	-	41	?	-
1c		23XD	1967	S	48	-	24.5	?	-
1d		24XC	1967	N	60	-	13.5	?	-
2		1	1967	-	90	-	8	?	-
2a		2	1967	-	90	-	42	?	-
2b		21XL	1967	S	48	-	59		-
2c		25XC	1967	N	45	-	40	?	-
3		-	1967	S	65	-	38	?	-
4	Roche, P. F.	1	1956	310	63	0	27	po,cp,pent	-
4a		2	1956	-	90	0	47	po,cp,pent	-
5	Sutherland, W. D.	1	1961	N45E	45	11.5	165.5	py,mar,po	-
6	White, J.	1	1955	S	?	0	40	po	-
6a		2	1955	S	?	0	40	po	-

AIRBORNE GEOPHYSICAL SURVEY DATA

No.	By For	Type of Survey	Flight Altitude	Flight Line Direction	Flight Line Spacing

GDF FORM NO. 4

MERRITT TOWNSHIP

GEOCHEMICAL SURVEY DATA

Map Sample Site Reference Number	Type of Survey	Analysis For	By	Reference
1	Geochemical	Au, Ag	Canadian Nickel Co.	File Merritt 12-A1

7

MISCELLANEOUS DATA

AGE DATING

Site	Method	Material	Reference	Result

NEWSPAPER CLIPPINGS FILE

NOTE: A file of newspaper clippings about the companies listed below, who have worked in this area, is maintained in the Regional/Resident Geologist's Office

SUDBURY

Kilembe Copper Cobalt Co. Ltd.

Northern Miner: Feb.6, 1976 & Oct.14, 1976.

MERRITT TOWNSHIP

ODM GENERAL INDEX SEARCH

Words searched

ESPANOLA
MERRITT TOWNSHIP

Index Volume	Listing	Report Volume	Part	Page
1	ESPANOLA, Hallam tp. (error)			
	Clay at, notes and photos	15	2	22-24
	Rocks at and near,	23	1	221,225, 233
	Waterpower at	14	1	69
		24	1	6
2	ESPANOLA GREYWACKE and LIMESTONE			
	Ontario northern	21	2	350
	Soo area, absent in	35	2	20
	Whiskey L. area	34	4	38
3	ESPANOLA FORMATION			
	N. shore of L. Huron	38	7	6
4	ESPANOLA FORMATION			
	Contacts	50	6	15,16
	Correlation	50	6	3,7
	Lithology and thickness	50	6	4
7	ESPANOLA, Sud.			
	Sections near, correlation of, notes and diagram	GR35		22,23
1	MERRITT TP., Sud.			
	Clay. See Espanola			
3	MERRITT TP., Sud.			
	Mineral Deposits	38	7	48

GEM FORM NO. 8

ODM GENERAL INDEX SEARCH

Words searched

Index Volume	Listing	Report Volume	Part	Page

MERRITT TOWNSHIP

GDM FORM NO. 8

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
		REGIONAL GEOLOGICAL COMPILATION MAPS		
Card, K. D.	1971	Panache Lake Area, West Part	O.D.M. Map P.668	1"=1 mile
	1978	Sudbury-Manitoulin Area	O.G.S. Map 2360	1"=2 miles
Card, K. D., & Lumbers, S. B.	1974,75	Sudbury-Cobalt	O.G.S. Map 2361	1"=4 miles
Thomson, J. E.	1961,68	Espanola Sheet	O.D.M. Map P.105	1"=2 miles
		GEOPHYSICAL MAPS		
		Aeromagnetic Maps		
O.D.M.-G.S.C.	1965	Espanola	1523G	1"=1 mile
	1965	Whitefish Falls	1522G	1"=1 mile
O.D.M.	1952	Merritt Township	A62	1"=¼ mile
O.D.M.-G.S.C.	1965	Sudbury, Ontario	7067G	1"=4 miles
O.G.S.	1976	Uranium Reconnaissance Program Airborne Gamma Ray Spectrometer Survey. Geophysical Series	Map P.160	1:250,000
Gupta, V. K.	1981	Bouguer Gravity and Generalized Geological Map of the Sudbury-Onaping Lake Area	O.G.S. Map P.2482	1:100,000
		SURFICIAL, PLEISTOCENE, TERRAIN ENGINEERING		
Dep't of Energy, Surveys & Mapping Branch	1975	Topographic Map, Whitefish Falls		1:50,000
	1975	Topographic Map, Espanola		1:50,000
Gartner, J. F.	1978	N.O.E.G.T.S Data Base Map, Espanola		1:100,000
	1980	N.O.E.G.T.S. Study 99, Espanola Area		

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
		MINERAL POTENTIAL MAPS		
Springer, J.	1977	Ontario Mineral Potential, Northern Part of Sudbury Sheet and Part of North Bay Sheet	O.G.S. Map P.1512	1:250,000
		GEOCHEMICAL		
		No Data Available, Nov.17, 1983		
		GEOLOGICAL REPORTS AND MAPS		
Card, K. D.	1965	Merritt Township	O.D.M. Map P.322	1"=¼ mile
	1975	Geology of the Panache Lake Area, Dist. of Sudbury and Manitoulin	O.F.R.5123	
	1976	Geology of the Espanola-Whitefish Falls Area, District of Sudbury, Ont.	O.D.M. GR131	
		Merritt and Foster Townships	O.D.M. Map 2311	1"=¼ mile
	1968	Economic Geology of the Espanola-Whitefish Falls Area	OFR5017	
	1971	Panache Lake Area (West Part)	O.D.M. Map P.668	1"=1 mile
	1978	Sudbury-Manitoulin Area, Districts of Sudbury and Manitoulin	O.D.M. GR166 O.D.M. Map 2360	1"=2 miles

GDIF FORM NO.4

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
Moore, E. S.	1929	Ore Deposits Near The North Shore of Lake Huron	O.D.M. AR38, pt.7	pp.48,49
O.G.S. & Mineral Resources Branch	1982	Mineral Potential Map of Ontario Southern Sheet Magnetic Compilation Map Geological Compilation Map 2197	OFR5328	 1"=16 miles 1"=16 miles 1"=16 miles
Shklanka, R.	1969	Copper, Nickel, Lead and Zinc Deposits of Ontario	O.D.M. MRC12	p.280
Vos, M. A., Smith, B. A., Stevenato, R. J.	1981	Industrial Minerals of the Sudbury Area	OFR5329	
Yundt, S. E., et al	1983	Industrial Minerals of Ontario	O.G.S. Map P.2591	1:50,000
		JOURNALS ARTICLES, THESES, TECHNICAL REPORTS		
Casshyap, S. M.	1966	Sedimentary Petrology and Stratigraphy of the Huronian Rocks South of Espanola, Ont. Ph.D., Western	Sudbury Theses File No.2	
Cooke, H. R. H.	1951	Sulphide Deposits West of Sudbury. B.Sc. Queen's	MP2	p.15
Eade, K. E.	1950	The Huronian Rocks of Northwestern Ontario. M.Sc., McG.	MP2	p.34
Ginn, R. M.	1960	The Relationship of the Bruce Series to the Granites in the Espanola Area. Ph.D., UT.	MP2	p.20
Long, D. G. F.	1978	Depositional Environments of a thick Proterozoic sandstone; the (Huronian) Mississagi Formation of Ontario, Canada.	Can. J. Earth Sci., Vol.15	pp.190-206

SELECTED REFERENCES

Author	Date	Title	Reference	Map Scales and/or Report Pages
Lindsay, D. A.	1967	The Sedimentology of the Huronian Gowganda Formation, (With Special Reference to Whitefish Falls Area). Ph.D., Johns Hopkins.	Sudbury Theses File No.16	
Lindsay, D. A.	1969	Glacial Sedimentology of the Precambrian Gowganda Formation, Ontario, Canada	Geol. Soc. Am. Bull., 80	pp.1685-1702
McLennan, S. M., Fryer, B. J., Young, G. M.	1979	The geo-chemistry of the carbonate-rich Espanola Formation (Huronian) with emphasis on rare earth elements	Can. J. Earth Sci., vol.16	pp.230-239
Quirke, T. T.	1915	Geology of Espanola District, Ontario Ph.D., UC.	MP2	p.38
Schenk, P. E.	1965	Depositional Environment of the Gowganda Formation (Precambrian) at the south end of Lake Timagami, Ontario	J. Sed. Pet., Vol.135	pp.309-318
Thachuk, N. M.	1960	The Origin of the Gowganda Banded Argillite. B.A.Sc., U.T.	MP2	p.44
Wright, J. D.	1935	The Age of Some Granite Batholiths North of Lake Huron and the Genetic Relations of the Arsenical Gold Ores to the Keweenawan Granites. Ph.D., UT.	MP2	p.48
Young, G. M.	1973	Origin of the carbonate-rich Early Proterozoic Espanola Formation, Ontario, Canada	Geol. Soc. Am. Bull., Vol.84	pp.135-160
	1981	The Early Proterozoic Gowganda Formation, Ontario Canada	Earth's Pre-Pleistocene Glacial Record. Cambrian U. Press	pp.807-812

NOTES AND ADDENDA

Aerial Photographs Index

Scale 1" = ¼ mile

Year	Roll	Line	Numbers
1959	17	4611	48-54
	17	4610	19-26
	54	4609	86-92
	54	4608	117-123
1946	14	165	7-15
	13	166	12-18
	11	167	13-21
	10	168	12-19
	10	169	10-17

MAPS NOT

FILMED

CARTES

OMISES